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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,627

07/31/2007

Francesco Nicastro

P/2528-42

4384

2352 7590 09/29/2009  
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EXAMINER

BARBEE, MANUEL L

ART UNIT

PAPER NUMBER

2857

MAIL DATE

DELIVERY MODE

09/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,627	<b>Applicant(s)</b> NICASTRO, FRANCESCO	
	<b>Examiner</b> MANUEL L. BARBEE	<b>Art Unit</b> 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/24/06</u>   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 12 is objected to because of the following informalities: On line 3 of claim 12, "the given frequencies" lacks antecedent basis. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-12 are process claims directed to methods for predictive maintenance. No machine or transformation is present in claims 1-21, and therefore, claims 1-21 are non-statutory.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 11, 12, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,330,525 to Hays et al.

As per claim 1:

With regard to acquiring a first and second measurement and obtaining a first and second value, Hays teaches process sensors (col. 10, line 43 - col. 11, line

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18). With regard to comparing the first and second value with given reference data, Hays teaches comparing the measured data to a threshold (col. 12, lines 26-44). With regard to determining a defect based on the comparison and performing maintenance to correct the defect, Hays teaches diagnosing whether equipment requires maintenance (col. 13, lines 5-10).

As per claim 2:

Hays teaches a comparing the first and second value to a reference with a first and second threshold and determining the defect as a function of each difference (col. 12, lines 26-44; col. 21, lines 21-35).

As per claim 4:

Hays teaches values that are a function of time col. 22, lines 37-51).

As per claim 11:

Hays teaches measuring temperature and vibration of a bearing (col. 12, lines 55-65; col. 13, lines 5-10).

As per claim 12:

Hays teaches a bearing which comprises an outer ring mounted coaxially with a rotary shaft and a number of rotating elements in particular balls, located between the outer ring and the rotary shaft and frequencies indicating damages to the outer ring, rotating element or rotary shaft of the bearing (col. 1, line 45 - col. 2, line 14).

As per claim 19:

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Hays teaches a fan (col. 6, lines 15-17). Hays teaches a bearing which comprises an outer ring mounted coaxially with a rotary shaft and a number of rotating elements in particular balls, located between the outer ring and the rotary shaft and frequencies indicating damages to the outer ring, rotating element or rotary shaft of the bearing (col. 1, line 45 - col. 2, line 14).

As per claim 21:

Hays teaches comparing each value with a respective threshold value (col. 12, lines 26-44).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANUEL L. BARBEE whose telephone number is (571)272-2212. The examiner can normally be reached on Monday-Friday from 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Manuel L. Barbee/  
Primary Examiner, Art Unit 2857

mlb  
September 27, 2009